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EXAMINER

WILLETT, STEPHAN F

ART UNIT	PAPER NUMBER
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2141

20

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 20

Application Number: 09/164,509

Filing Date: 09/30/1998

Appellant(s): Reinhard Klemm

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Kevin Mason  
For Appellant

**EXAMINER'S ANSWER**

This is in response to appellant's brief on appeal filed 12/29/2003.

**(1) *Real Party in Interest***

Examiner agrees with the statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

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Examiner agrees with the statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

Examiner agrees with the statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

Examiner agrees with the appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

Examiner agrees with the summary of invention contained in the brief is correct, and notes that the basis of the arguments regarding allowable subject matter such as the order the documents are prefetched is not in the summary provided.

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**(6) *Issues***

Examiner agrees with the appellant's statement of the issues in the brief is correct.

However, a secondary issue is raised as to whether HTTP round trip times are obvious in light of the teachings of measuring round trip times based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains

**(7) *Grouping of Claims***

Examiner agrees with the appellant's grouping of the claims.

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

6,067,565	Horvitz et al.	05-2000
6,078,956	Bryant et al	06-2000

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5,961,603	Kunkel et al.	10-1999
6,182,113	Narayanaswami	06-2001
6,119,235	Vaid et al.	09-2000

**(10) Grounds of Rejection**

***Multiple Rejections (I-III)***

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Horvitz et al. in view of Bryant

2. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvitz et al. with Patent Number 6,067,565 in view of Bryant et al. with Patent Number 6,078,956.

3. Regarding claim(s) 1, 25, 27-29, Horvitz teaches a database communication network. Horvitz teaches prefetching Internet resources, col. 24, lines 4-5. Horvitz teaches prefetching data dependent on round trip times based on send and receive times, col. 24, lines 12-20. Horvitz teaches fetching in descending order as “descending order”, col. 29, lines 39-40. Horvitz teaches

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the invention in the above claim(s) except for explicitly teaching fetching data dependent on HTTP GET round trip times. In that Horvitz operates to obtain data resources from the Internet the artisan would have looked to the Internet database arts for details of implementing prefetching of data. In that art, Bryant, a related database network, teaches that "measure response times as seen by an end user for requests submitted from a Web browser to a Web server", col. 2, lines 2-3 in order to provide better Web access. Bryant specifically teaches "the various components that comprise the 'response time' of a given HTTP request", col. 5, lines 7-26. Further, Bryant suggests that "measur[ing] response times as seen by an end user for requests submitted from a Web browser to a Web server on the World Wide Web", col. 2, lines 2-4 will result from implementing his downloading system. The motivation to incorporate time limitations on data requests insures that user data is readily available. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the time limits as taught in Bryant into the prefetching system described in Horvitz because Horvitz operates with data constraints and Bryant suggests that optimization can be obtained when data limitations are incorporated in the downloading system. Therefore, by the above rationale, the above claims are rejected.

4. Regarding claims 2, 18, Horvitz teaches parallel processing, col. 88, lines 59-64 and col. 9, lines 64-65. Thus, the above claim limitations are obvious in view of the combination.

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5. Regarding claims 3, 19, Horvitz teaches prefetching with accessed and non-accessed servers, col. 24, lines 11-16. Thus, the above claim limitations are obvious in view of the combination.

6. Regarding claims 4, 20, Horvitz teaches fetching based on data size, col. 24, line 16 and col. 27, lines 55-58. Thus, the above claim limitations are obvious in view of the combination.

7. Regarding claims 5-7, 21-22, 26, Horvitz teaches fetching based on average access time statistics, col. 24, line 23-26 and Bryant teaches the same, col. 6, lines 64-66. Thus, the above claim limitations are obvious in view of the combination.

8. Regarding claims 8, Horvitz teaches prefetching after a page is obtained, col. 23, lines 53-55. Thus, the above claim limitations are obvious in view of the combination.

9. Regarding claims 9, Horvitz teaches updates based on new page selections, col. 9, lines 4-6. Thus, the above claim limitations are obvious in view of the combination.

10. Regarding claims 10, Horvitz teaches checking current cache for desired pages, col. 4, lines 35-37. Thus, the above claim limitations are obvious in view of the combination.

11. Regarding claims 11, 17, 23-24, Horvitz teaches filtering web pages, col. 23, lines 19-26. Thus, the above claim limitations are obvious in view of the combination.

12. Regarding claims 12-13, 24, Horvitz teaches filtering non-HTTP web pages, col. 23, lines 29-30. Thus, the above claim limitations are obvious in view of the combination.

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13. Regarding claims 14, Horvitz teaches not prefetching large files, col. 24, lines 18-20

Thus, the above claim limitations are obvious in view of the combination.

14. Regarding claims 15-16, Horvitz teaches filtering based on response times, col. 28, lines 28-29 and col. 29, lines 35-37. Thus, the above claim limitations are obvious in view of the combination.

## II. Kunkel et al. in view of Narayanaswami and Bryant

15. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunkel et al. with Patent Number 5,961,6031 in view of Narayanaswami with Patent Number 6,182,113 and Bryant et al. with Patent Number 6,078,956.

16. Regarding claim(s) 1, 4-8, 14-16, 20-22, 25-29, Kunkel teaches a database communication network. Kunkel teaches prefetching Internet resources, col. 5, lines 1-5. Kunkel teaches fetching data dependent on round trip times based on send and receive times and data size as “by keeping statistics corresponding to the number of corrupted data packets received on each of the upstream channels”, col. 8, lines 14-16 and “if a hyperlink request acknowledge (ACK) is subsequently received with a pre-determined number of time periods”, col. 11, lines 61-63. Kunkel teaches fetching in descending order as various obvious dependent factors to determine which type of data is prefetched and the data’s priority, col. 6, lines 39-40. Kunkel teaches the invention in the above claim(s) except for explicitly teaching fetching data dependent



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on HTTP round trip times and data size. In that Kunkel operates to obtain data resources from the Internet the artisan would have looked to the Internet database arts for details of implementing prefetching of data. In that art, Narayanaswami, a related database network, teaches that present Web pages “are resolved periodically so as to maintain a list of currently active links”, col. 6, lines 17-22 based on one or more variables. Narayanaswami specifically teaches “to employ the user-specified criterion or criteria (e.g. TOD, or TOD and LOC, or TOC, LOC, and UBW)”, col. 7, lines 10-13 wherein available bandwidth directly relates to data file size. Further, Narayanaswami suggests that savings will result from implementing his downloading system, col. 2, line 46. Also, in that art, Bryant, a related database network, teaches that “measure response times as seen by an end user for requests submitted from a Web browser to a Web server”, col. 2, lines 2-3 in order to provide better Web access. Bryant specifically teaches “the various components that comprise the ‘response time’ of a given HTTP request”, col. 5, lines 7-26. Further, Bryant suggests that “measur[ing] response times as seen by an end user for requests submitted from a Web browser to a Web server on the World Wide Web”, col. 2, lines 2-4 will result from implementing his downloading system. The motivation to incorporate times limits on downloads based on size insures that user data is readily available. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the time and capacity limits criteria as taught in Narayanaswami and Bryant into the prefetching system described in Kunkel because Kunkel operates with data constraints and Narayanaswami and

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Bryant suggests that optimization can be obtained when data limitations and criteria are used. Therefore, by the above rationale, the above claims are rejected.

17. Regarding claims 2 and 18, Kunkel teaches parallel fetching at col. 5, lines 28-29. Thus, the above claim limitations are obvious in view of the combination.

18. Regarding claims 3, 10 and 19, Kunkel teaches prefetching based on previous accesses at col. 5, lines 57-60. Thus, the above claim limitations are obvious in view of the combination.

19. Regarding claims 9, Kunkel teaches termination of prefetching at col. 13, lines 29-31. Thus, the above claim limitations are obvious in view of the combination.

20. Regarding claims 11-13 and 23-24, Kunkel teaches filtering data at col. 5, 7, 8, lines 65-67, 59-63, 6-10. Thus, the above claim limitations are obvious in view of the combination.

### III. Kunkel et al. in view of Vaid et al. and Bryant

21. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunkel et al. with Patent Number 5,961,6031 in view of Vaid et al. with Patent Number 6,119,235 and Bryant et al. with Patent Number 6,078,956.

22. Regarding claim(s) 1, 4-8, 14-16, 20-22, 25-29, Kunkel teaches a database communication network. Kunkel teaches prefetching Internet resources at col. 5, lines 1-5. Kunkel teaches fetching data dependent on round trip times based on send and receive times and data size as "by keeping statistics corresponding to the number of corrupted data packets received

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on each of the upstream channels”, col. 8, lines 14-16 and “if a hyperlink request acknowledge (ACK) is subsequently received with a pre-determined number of time periods”, col. 11, lines 61-63. Kunkel teaches the invention in the above claim(s) except for explicitly teaching fetching data dependent on round trip times and data size. Kunkel teaches fetching in descending order as various obvious dependent factors to determine which type of data is prefetched and the data’s priority, col. 6, lines 39-40. Kunkel teaches the invention in the above claim(s) except for explicitly teaching fetching data dependent on HTTP round trip times and data size. In that Kunkel operates to obtain data resources from the Internet the artisan would have looked to the Internet database arts for details of implementing prefetching of data. In that art, Vaid, a related database network, teaches a system to schedule downloading of data in order to provide optimized computer usage. Vaid specifically teaches “estimating a bit rate over a round-trip-time between the data source and the data receiver”, abstract and data size as related to bandwidth again, col. 6, lines 58-63. Further, Vaid suggests that savings will result from implementing his downloading system. Also, in that art, Bryant, a related database network, teaches that “measure response times as seen by an end user for requests submitted from a Web browser to a Web server”, col. 2, lines 2-3 in order to provide better Web access. Bryant specifically teaches “the various components that comprise the ‘response time’ of a given HTTP request”, col. 5, lines 7-26. Further, Bryant suggests that savings will result from implementing his downloading system. The motivation to incorporate limits on downloads insures that user limits are respected. Thus, it

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would have been obvious to one of ordinary skill in the art to incorporate the time and capacity limits as taught in Vaid and Bryant into the prefetching system described in Kunkel because Kunkel operates with data constraints and Vaid and Bryant suggest that optimization can be obtained when data limitations are used. Therefore, by the above rationale, the above claims are rejected.

23. Regarding claims 2 and 18, Kunkel teaches parallel fetching at col. 5, lines 28-29. Thus, the above claim limitations are obvious in view of the combination.

24. Regarding claims 3, 10 and 19, Kunkel teaches prefetching based on previous accesses at col. 5, lines 57-60. Thus, the above claim limitations are obvious in view of the combination.

25. Regarding claims 9, Kunkel teaches termination of prefetching at col. 13, lines 29-31. Thus, the above claim limitations are obvious in view of the combination.

26. Regarding claims 11-13 and 23-24, Kunkel teaches filtering data at col. 5, 7, 8, lines 65-67, 59-63, 6-10. Thus, the above claim limitations are obvious in view of the combination.

**(11) Response to Argument**

27. Applicant argues “that the order of fetching is critical to the performance of prefetching Internet resources”, and even “Horvitz actually teaches away from the present invention”, Paper No. 19, Page 3, lines 25-27. First, the applicant does not claim or substantiate such claims, yet. With regard to criticalities associated with performance as these relate to order, the order results

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in well known different performance results. This is an inherent result that if the larger pages are prefetched first more bandwidth will be consumed since this is directly related to the size of a data file and degraded performance will result and vice versa with smaller sized pages. With regard to teaching away from the invention, it should be noted that the invention and the references overall goal is to reduce response times, however, secondary constraints such as requesting larger documents or ones with the "longest access times" first is still secondary and an obvious deviation from the primary goal of reducing response times for certain desired pages. However, the claims do not read on this obvious secondary result from the order certain documents are prefetched, yet. Thus, Applicant's arguments can not be held as persuasive regarding patentability.

28. Applicant's main and first argument is that "that prefetching is performed according to an ascending order of prefetch times", Paper No. 14, Page 8, lines 14-15 and "Vaid estimates the round-trip times of TCP/IP packets", Paper No. 14, Page 9, lines 10-11, but descending order is not taught. However, Horvitz teaches fetching in descending order as "descending order", col. 29, lines 39-40. Implicitly and impliedly, various orders and round-trip times are taught and language identical or verbatim is not required in an obvious rejection. The fact time may be inversely related, as argued by the applicant, to order, or vice versus, is an obvious result since either order is suggested and Horvitz says verbatim "descending order". The limited interpretation of the teachings is not reasonable based on the subject matter as a whole as would

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have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. The references should not be read in a vacuum, the teachings are not mutually exclusive, and must be taken in context of what was reasonable based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

29. Note that reasonable “inferences”, and “common sense” may be considered in formulating rejections for obviousness. Specifically, *In re Preda*, 401 F.2d 825, 159 USPQ 342, 344 (CCPA 1968) states “in considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” Also, *In re Bozek*, 416 F.2d 738, 163 USPQ 545, 549 (CCPA 1969) states that obviousness may be concluded from “common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference”. Additionally, see *In re Gauerke*, 24 CCPA 725, 86 F.2d 330, 31 USPQ 330, 333 (CCPA 1936), and *In re Libby*, 45 CCPA 944, 255 F.2d 412, 118 USPQ 94, 96 (CCPA 1958), and *In re Jacoby*, 309 F.2d 738, 125 USPQ 317, 319 (CCPA 1962), and *In re Wiggins*, 488 F.2d 538, 543, 1979 USPQ 421, 424 (CCPA 1973).

30. Also, “[the] specification, having described the whole, necessarily described the part remaining”, *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977), see also

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Ex parte Grasselli, 231 USPQ 393 (Bd, App. 1983) and negative limitations “tended to define the invention in terms of what it was not, rather than pointing out the invention”, MPEP 2172.05(I). A negative type limitation, that implicitly teaches other related parts remaining, to avoid obvious elements of a reference does not exude novelty of the whole. Thus, Applicant’s arguments can not be held as persuasive regarding patentability.

31. Bryant was cited to explicitly teach verbatim that HTTP round trip times, as well as response times at any of the 7 OSI layers, is taught and inherent. The appellant reopens arguments whether HTTP round trip times are implicitly, impliedly, inferentially and/or inherently taught in the other references. We feel that HTTP round trip times are also taught in the other rejections and is why they were maintained, thus the previous arguments to support this position have been copied below. Thus, a secondary issue is whether HTTP round trip times are obvious in light of the teachings of measuring round trip times based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

32. Patentability when fetching based broadly on HTTP round trip times based on past performance is not reasonable based on the subject matter as a whole as would have been understood at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. In addition, HTTP round trip times are inherently understood in a HEAD or TCP ACK request.

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33. Applicant suggests “these latencies are generally not reflected in the TCP/IP round-trip times computed” in Paper No. 9, Page 5, lines 5-6. However, Bryant specifically teaches “the various components that comprise the ‘response time’ of a given HTTP request”, col. 5, lines 7-26. Thus, Applicant’s arguments can not be held as persuasive regarding patentability.

34. Applicant suggests “the present invention, on the other hand, estimates the round-trip time of HTTP request/responses” Paper No. 6, Page 8, lines 10-11 and provides an excellent distinguishing example. But round trip time is widely known at all OSI layers, as implied and inherent in the HEAD function. Thus, Applicant’s arguments can not be held as persuasive regarding patentability.

35. Thus, the prior art, as applied, fully suggest and teaches the limitations disclosed and claimed by the Appellant and Appellant’s arguments cannot be held persuasive regarding patentability with regard to these limitations.



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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Patent Examiner

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February 20, 2004

Conferees:

Le Luu

Kenneth Coulter



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SUPERVISOR EXAMINER